

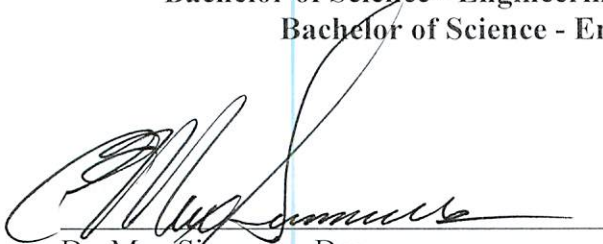
**Transfer Agreement
Between
Oklahoma City Community College
And
University of Central Oklahoma**

Effective Academic Year: 2018-2019

Associate in Science Degree - Engineering

And

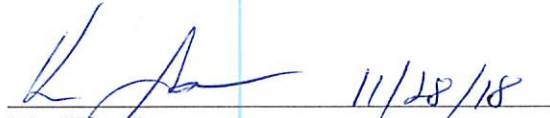
**Bachelor of Science - Electrical Engineering - Electrical Engineering
Bachelor of Science - Engineering Physics - Mechanical Engineering
Bachelor of Science - Engineering Physics - Physics**



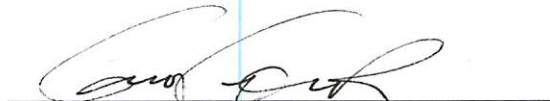
Dr. Max Simmons, Dean
Science, Engineering, and Mathematics

11/28/18

Date



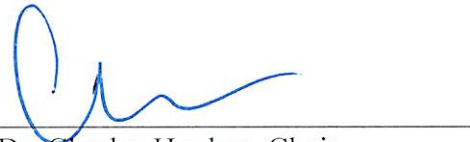
Ms. Kim Jameson
Associate Vice President for Academic Affairs



Mr. Greg Gardner
Vice President for Academic Affairs

11/29/2018

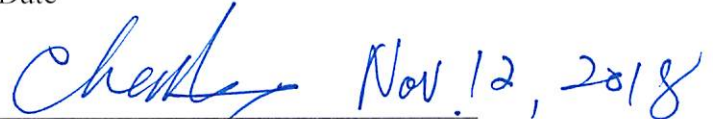
Date



Dr. Charles Hughes, Chair
Engineering and Physics

11/7/18

Date



Dr. Wei Chen, Dean
College of Mathematics and Science



Dr. John Barthell, Provost
Vice President for Academic Affairs

11-17-18

Date

Transfer Agreement

Oklahoma City Community College: AS - Engineering
And

University of Central Oklahoma: BS - Electrical Engineering – Electrical Engineering

To comply with this agreement, students must complete the associate’s degree with the major listed above and include the specific courses listed below.

Courses listed here are required for the agreement. Credited courses completed as part of the AA or AS that do not apply to the general education at OCCC or the UCO major transfer to UCO as electives.

OCCC

- General Education requirements
- *PHIL 1213 Introduction to Ethics
- ENGR 2243 Statics
- *MATH 2104 Calculus and Analytic Geometry I
- *MATH 2214 Calculus and Analytic Geometry II
- MATH 2314 Calculus and Analytic Geometry III
- *PHYS 2014 Engineering Physics I
- *PHYS 2114 Engineering Physics II
- ENGR 2613 Electrical Science
- CS 2363 C++
- CHEM 1415 Chemistry for Engineers

UCO

- University Core completed with AA or AS
- PHIL 1123 Contemporary Moral Problems
- ENGR 2033 Statics
- MATH 2313, 2323, 2333, and 2343 Calculus I through Calculus 4
- PHY 2014 Physics for Science/Eng I and Lab
- PHY 2114 Physics for Science/Eng II and Lab
- ENGR 2303 Electrical Science
- ENGR 1213 Engineering Computing and Lab (sub
- CHEM 1315 Chemistry for Engineering and Lab

* In General Education Courses section of degree at OCCC

This degree requires additional course work, including the general education, as stated in the OCCC Catalog. Other OCCC courses may or may not apply to the UCO major. That specific information can be found on the UCO website under the Online Transfer Guides.

Total at Oklahoma City Community College.....62-64

To be taken at the University of Central Oklahoma.....60-64

(May be taken at OCCC.) This signifies that a UCO course requirement can be met with the equivalent OCCC course (found on the UCO website). To take this course at OCCC, the student should confirm that it will fit into the associate’s degree without exceeding the requirements. A minimum of 60 hours must be taken at a baccalaureate granting institution, so exceeding 64 credit hours at the community college means the student will exceed the minimum of 124 credit hour total. A minimum of 40 hours of 3/4000 level courses are required for the baccalaureate. Courses from community colleges are 1/2000 level.

Support Courses6

ECON	1103	Introduction to Economics (May be taken at OCCC.)
FMKT	2323	Global Protocol and Diversity (or Foreign Language) (May be taken at OCCC.)

Successful completion of the courses listed in the above table satisfies the requirement for the following Support Courses.

*MATH	1533	Algebra for STEM AND (May be taken at OCCC.)
*MATH	1593	Plane Trigonometry (May be taken at OCCC.)

One year of high school physics OR		
PHY	1003	Introduction to Physics (May be taken at OCCC.)

Electrical Engineering - Electrical Engineering..... 58

Physics6

Required courses:

PHY	3103	Modern Physics
PHY	3883	Mathematical Physics I

Engineering46

Required courses:

ENGR	1112	Introduction to Engineering and Laboratory
ENGR	2311	Electrical Science Laboratory
#ENGR	3183	Electromagnetic Fields I
ENGR	3223	Digital Logic Design and Laboratory
ENGR	3303	Engineering Probability & Statistics
#ENGR	3323	Signals and Systems
ENGR	3331	Signals and Systems Laboratory
ENGR	3403	Analog Electronics
ENGR	3421	Analog Electronics Laboratory
#ENGR	3413	Materials Science
ENGR	3613	Microprocessors and Laboratory
ENGR	3703	Computational Methods in Engineering
ENGR	3803	Electrical Power Systems
#*ENGR	4323	Digital and Analog Communication
#*ENGR	4333	Digital Signal Processing
ENGR	4351	Digital Signal Processing Laboratory
#*ENGR	4803	Mechatronics & Laboratory
#ENGR	4882	Senior Engineering Design I
#ENGR	4892	Senior Engineering Design II

Mathematics3

Required course:

MATH	3103	Differential Equations
------	------	------------------------

Guided Engineering Electives3

Select from the following:

*ENGR	4183	Electromagnetic Fields II
ENGR	4263	Engineering Optics
ENGR	4303	Control Systems
*ENGR	4613	Photonics
*ENGR	4633	Solid State Devices

*Students in the Accelerated BS/MS program in Electrical Engineering must enroll in the graduate level versions of this course, and must choose the 5000 level of either Photonics, Electromagnetic Fields II or Solid State Devices as one of the engineering electives. Students need only three 5000-level courses as part of the accelerated program.

Admission into Engineering and Physics Upper Division is required.

Minimum Hours required 125*

*Total hours required for this major may exceed the minimum 124 credit hour institutional requirement and will vary according to course selection. It is recommended students complete high school algebra II, trigonometry, physics and two years of a second language in high school.

Minimum Grade Requirements

1. Average in (a) all college course work, and (b) course work at UCO.....2.00
2. A minimum grade of “C” must be earned in all courses in the major to count toward meeting degree requirements.

Students must meet all bachelor degree requirements at UCO to include minimums of:

- 40 hours of upper division course work
- 30 hours in residence at UCO
- 15 of the last 30 hours must be taken in residence at UCO
- 60 hours from baccalaureate granting institutions

Program-to-Program Transfer policies are available in the Introduction for Program-to-Program Agreements on the UCO website at the top of the list of agreements. Links to the agreements can be found on the Academic Affairs or Transfer Student Support web pages.

Admission into Engineering and Physics Upper Division

Students seeking the B.S. in Biomedical Engineering, Electrical Engineering, Engineering Physics – Physics and Mechanical Engineering are required to make formal application to the Chairperson of the Department of Engineering and Physics for admission into the upper division of each of these majors. Applications must be submitted to the Department of Engineering and Physics on or before the last Monday of January for Fall admission and the last Monday of August for Spring admission.

Upper division admission is open to students meeting Engineering and Physics upper division admission requirements. To be admitted into upper division, the student must have:

A minimum retention grade point average (GPA) of 2.00 in all course work completed by the time the student is formally admitted into upper division.

Completed 60 semester credit hours by the time the student is formally admitted into upper division.

Completed the following courses or their equivalent with a minimum grade of “C” by the time the student is formally admitted into upper division:

MATH	2313	Calculus 1
MATH	2323	Calculus 2
MATH	2333	Calculus 3
MATH	2343	Calculus 4
MATH	3103	Differential Equations (Recommended)
PHY	2014	Physics for Science & Engineering I & Lab
PHY	2114	Physics for Science & Engineering II & Lab
ENGR	1112	Introduction to Engineering & Lab
ENGR	1213	Engineering Computing & Lab
ENGR	2033	Statics
ENGR	2303	Electrical Science
ENGR	2311	Electrical Science Lab
ENGR	3303	Engineering Probability and Statistics (Recommended)
CHEM	1112	General Chemistry I Recitation/Lab AND (for Biomedical Engineering)
CHEM	1103	General Chemistry I OR (for Biomedical Engineering)
CHEM	1315	Chemistry for Engineering and Lab (for Electrical Engineering, Engineering Physics-Physics, Mechanical Engineering)

Formal approval by the department Faculty Advisor and Department Chair is required for admission. Preference is given to University of Central Oklahoma students. The student may enroll in no more than nine (9) hours of 3000 and 4000 level courses in the major prior to admission into upper division unless they secure formal approval from the Department of Engineering and Physics.

Transfer Agreement

Oklahoma City Community College: AS - Engineering
And

University of Central Oklahoma: BS - Mechanical Engineering - Mechanical Engineering

To comply with this agreement, students must complete the associate's degree with the major listed above and include the specific courses listed below.

Courses listed here are required for the agreement. Credited courses completed as part of the AA or AS that do not apply to the general education at OCCC or the UCO major transfer to UCO as electives.

OCCC

- General Education requirements
- *PHIL 1213 Introduction to Ethics
- CHEM 1415 Chemistry for Engineers
- ENGR 2243 Statics
- ENGR 2523 Dynamics
- ENGR 2143 Strength of Materials
- ENGR 2613 Electrical Science
- *MATH 2104 Calculus and Analytic Geometry I
- *MATH 2214 Calculus and Analytic Geometry II
- MATH 2314 Calculus and Analytic Geometry III
- *PHYS 2014 Engineering Physics I
- *PHYS 2114 Engineering Physics II

UCO

- University Core completed with AA or AS
- PHIL 1123 Contemporary Moral Problems
- CHEM 1315 Chemistry for Engineering and Lab
- ENGR 2033 Statics
- ENGR 2043 Dynamics
- ENGR 2143 Strength of Materials
- ENGR 2303 Electrical Science
- MATH 2313, 2323, 2333, and 2343 Calculus I through Calculus 4
- PHY 2014 Physics for Science/Eng I and Lab
- PHY 2114 Physics for Science/Eng II and Lab

* In General Education Courses section of degree at OCCC

This degree requires additional course work, including the general education, as stated in the OCCC Catalog. Other OCCC courses may or may not apply to the UCO major. That specific information can be found on the UCO website under the Online Transfer Guides.

Total at Oklahoma City Community College.....61-64

To be taken at the University of Central Oklahoma.....60-63

(May be taken at OCCC.) This signifies that a UCO course requirement can be met with the equivalent OCCC course (found on the UCO website). To take this course at OCCC, the student should confirm that it will fit into the associate's degree without exceeding the requirements. A minimum of 60 hours must be taken at a baccalaureate granting institution, so exceeding 64 credit hours at the community college means the student will exceed the minimum of 124 credit hour total. A minimum of 40 hours of 3/4000 level courses are required for the baccalaureate. Courses from community colleges are 1/2000 level.

Support Courses6

- ECON 1103 Introduction to Economics (May be taken at OCCC.)
- FMKT 2323 Global Protocol and Diversity
(or Foreign Language) (May be taken at OCCC.)

Successful completion of the courses listed in the above table satisfies the requirement for the following Support Courses.

- *MATH 1533 Algebra for STEM AND (May be taken at OCCC.)
- *MATH 1593 Plane Trigonometry (May be taken at OCCC.)
- One year of high school physics OR
- PHY 1003 Introduction to Physics (May be taken at OCCC.)

Mechanical Engineering.....57

Physics3

Required courses:

- PHY 3883 Mathematical Physics I

Engineering45

Required courses:

- ENGR 1112 Introduction to Engineering and Laboratory
- ENGR 1213 Engineering and Computing and Laboratory
- ENGR 2151 Strength of Materials Lab
- ENGR 2311 Electrical Science Laboratory
- ENGR 3203 Thermodynamics
- ENGR 3211 Thermal Engineering Laboratory
- ENGR 3303 Engineering Probability and Statistics
- #ENGR 3323 Signals and Systems
- ENGR 3331 Signals and Systems Laboratory
- #ENGR 3363 Mechanical Engineering Design
- #ENGR 3413 Materials Science
- #ENGR 3443 Fluid Mechanics
- #ENGR 3451 Fluid Mechanics Lab
- ENGR 3703 Computational Methods in Engineering
- #*ENGR 4123 Heat Transfer
- #ENGR 4141 Heat Transfer Lab
- #*ENGR 4533 Thermal Systems Design
- #*ENGR 4803 Mechatronics & Laboratory
- #ENGR 4882 Senior Engineering Design I
- #ENGR 4892 Senior Engineering Design II

Mathematics3

Required course:

- MATH 3103 Differential Equations

Guided Physics or Engineering Electives.....6

Selected from the following:

- ENGR 3153 Machine Dynamics
- ENGR 3223 Digital Logic Design and Laboratory
- ENGR 3803 Electrical Power Systems
- ENGR 4103 Finite Element Analysis
- ENGR 4153 Vibration
- ENGR 4203 Refrigeration and Air Conditioning
- ENGR 4303 Control Systems
- ENGR 4313 Fluid Dynamics
- BME 4343 Biomechanics
- PHY 4163 Analytical Mechanics

*Students in the Accelerated BS/MS program in Engineering Physics must enroll in the graduate level versions of this course.

Admission into Engineering and Physics Upper Division is required.

Minimum Hours required 127*

*The number of credits needed to meet degree requirements exceeds 124 hours and will vary according to course selection.

Minimum Grade Requirements

1. Average in (a) all college course work, and (b) course work at UCO.....2.00
2. A minimum grade of "C" must be earned in all courses in the major to count toward meeting degree requirements.

Students must meet all bachelor degree requirements at UCO to include minimums of:

- 40 hours of upper division coursework
- 30 hours in residence at UCO
- 15 of the last 30 hours must be taken in residence at UCO
- 60 hours from baccalaureate granting institutions

Program-to-Program Transfer policies are available in the Introduction for Program-to-Program Agreements on the UCO website at the top of the list of agreements. Links to the agreements can be found on the Academic Affairs or Transfer Student Support web pages.

Admission into Engineering and Physics Upper Division

Students seeking the B.S. in Biomedical Engineering, Engineering Physics - Electrical Engineering, Engineering Physics - Mechanical Engineering, and Engineering Physics - Physics are required to make formal application to the Chairperson of the Department of Engineering and Physics for admission into the upper division of each of these majors. Applications must be submitted to the Department of Engineering and Physics on or before the last Monday of January for Fall admission and the last Monday of August for Spring admission.

Upper division admission is open to students meeting Engineering and Physics upper division admission requirements. To be admitted into upper division, the student must have:

A minimum retention grade point average (GPA) of 2.00 in all course work completed by the time the student is formally admitted into upper division.

Completed 60 semester credit hours by the time the student is formally admitted into upper division.

Completed the following courses or their equivalent with a minimum grade of "C" by the time the student is formally admitted into upper division:

- MATH 2313 Calculus 1
- MATH 2323 Calculus 2
- MATH 2333 Calculus 3
- MATH 2343 Calculus 4
- MATH 3103 Differential Equations (Recommended)
- PHY 2014 Physics for Science & Engineering I & Lab
- PHY 2114 Physics for Science & Engineering II & Lab
- ENGR 1112 Introduction to Engineering & Lab
- ENGR 1213 Engineering Computing & Lab
- ENGR 2033 Statics
- ENGR 2303 Electrical Science
- ENGR 2311 Electrical Science Lab
- ENGR 3303 Engineering Probability and Statistics (Recommended)
- CHEM 1112 General Chemistry I Recitation/Lab AND (for Biomedical Engineering)
- CHEM 1103 General Chemistry I OR (for Biomedical Engineering)
- CHEM 1315 Chemistry for Engineering and Lab (for Engineering Physics-Electrical Systems, Mechanical Systems, and Physics)

Formal approval by the department Faculty Advisor and Department Chair is required for admission. Preference is given to University of Central Oklahoma students. The student may enroll in no more than nine (9) hours of 3000 and 4000 level courses in the major prior to admission into upper division unless they secure formal approval from the Department of Engineering and Physics.